

REMARKS

This Amendment is fully responsive to the final Office Action dated June 17, 2008, issued in connection with the above-identified application. Claims 26-56 were previously pending in the present application. With this Amendment, claims 26-29, 35-37, 39-41 and 44-56 have been amended; and claims 57 and 58 have been added. Accordingly, claims 26-58 are now pending in the present application. No new matter has been introduced by the amendments made to the claims, or by the new claims added. Favorable reconsideration is respectfully requested.

In the Office Action, claims 26-36, 40-50 and 52-56 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (U.S. Publication No. 2003/0171931, hereafter “Chang”) in view of Nguyen et al. (U.S. Patent No. 6,263,309, hereafter “Nguyen”). The Applicants have amended independent claims 26, 29, 36, 40, 44-50 and 52-56 to help further distinguish the present invention from the cited references.

As amended, independent claims 26, 29, 36, 40, 44-50 and 52-56 more particularly point out that a standard model is created from a plurality of references models, and the creation of the standard model is based on statistics of the plurality of reference models. This feature of the present invention is fully supported by the Applicants’ disclosure (see e.g., pgs. 26-29; and Fig. 1). Additionally, the features noted above are not believed to be disclosed or suggested by the cited prior art.

In the Office Action, the Examiner relies on Chang in view of Nguyen for disclosing or suggesting the feature recited in independent claims 26, 29, 36, 40, 44-50 and 52-56. However, the Examiner relies specifically on Chang for disclosing or suggesting the creation of a standard model, as recited in claims 26, 29, 36, 40, 44-50 and 52-56 (see e.g., ¶[0053] and ¶[0057]). However, the Applicants assert that Chang fails to disclose or suggest the claimed creation of a standard model as recited in claims 26, 29, 36, 40, 44-50 and 52-56 (as amended).

Chang discloses a system for creating user-dependent recognition models that are accessible by a user. Specifically, based on a user input, one or more cohort models are identified from a set of possible cohort models. The cohort models are identified based on a similarity measure between the set of possible cohort models and the data inputted

by the user. Chang in ¶[0053] describes the operation of a selection cohort model component illustrated in Fig. 6. Additionally, Chang in ¶[0057] describes the operation of a custom acoustic model generation component illustrated in Fig. 7. As described in Chang, the acoustic model generation component receives a speaker-independent acoustic model and cohort data. The acoustic model generation component then modifies the parameters of the speaker-independent acoustic model based on the parameters of the estimated cohort models, which are included in the cohort data.

Thus, although Chang discloses the storage of a plurality of cohort models and the generation of a customized speech model, the generation of the customized speech model appears to be based on the use of one cohort model. Thus, Chang fails to disclose the generation of a customized speech model, using a plurality of cohort models.

Additionally, in Chang, the customized speech model is based on a large amount of data selected according to the cohort model. Therefore, the amount of processing is large, and the system would not be able to function during authentication or online authentication. Conversely, in the present invention, the creation of the standard model is based on statistics of the plurality of reference models. Thus, in the present invention there is a learning process performed based on parameters (i.e., statistics) of the reference models. Accordingly, since this learning is performed through the parameters of the reference models (which is a compression of a large amount of data selected by cohort model and the like) it becomes possible to create the standard model instantaneously, and use it in authentication or online authentication.

As noted above, the Examiner does not rely on Nguyen for disclosing or suggesting the creation of a standard model, as recited in claims 26, 29, 36, 40, 44-50 and 52-56. Regardless, after a detailed review of Nguyen, the reference fails to overcome the deficiencies noted above in Chang. Accordingly, no combination of Chang and Nguyen would result in, or otherwise render obvious, independent claims 26, 29, 36, 40, 44-50 and 52-56 (as amended). Likewise, no combination of Chang and Nguyen would result in, or otherwise render obvious, claims 27, 28, 30-35 and 41-43 at least by virtue of their respective dependencies from independent claims 26, 29 and 40.

In the Office Action, claims 37, 38 and 51 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Nguyen, and further in view of

Junqua (U.S. Patent No. 6,253,181, hereafter “Junqua”). The Applicants have amended independent claims 37 and 51 to help further distinguish the present invention from the cited prior art. Specifically, independent claims 37 and 51 have been amended similar to claims 26, 29, 36, 40, 44-50 and 52-56 noted above. That is, independent claims 37 and 51 have been amended to more particularly point out that a standard model is created from a plurality of references models, and the creation of the standard model is based on statistics of the plurality of reference models.

In the Office Action, although the Examiner has rejected independent claims 37 and 51 based on the combination of Chang, Nguyen and Junqua, the Examiner still relies specifically on Chang for disclosing or suggesting the creation of a standard model, as recited in claims 37 and 51.

As noted above, although Chang discloses the storage of a plurality of cohort models and the generation of a customized speech model, the generation of the customized speech model appears to be based on the use of one cohort model. Thus, Chang fails to disclose the generation of a customized speech model, using a plurality of cohort models. Moreover, Nguyen and Junqua fail to overcome the deficiencies noted above in Chang.

Accordingly, no combination of Chang, Nguyen and Junqua would result in, or otherwise render obvious, independent claims 37 and 51 (as amended). Likewise, no combination of Chang, Nguyen and Junqua would result in, or otherwise render obvious, claim 38 at least by virtue of its dependency from independent claim 37.

In the Office Action, claim 39 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Nguyen and Junqua, and further in view of Kanevsky et al. (U.S. Patent No. 6,442,519, hereafter “Kanevsky”).

Claim 39 depends from independent claim 37. As noted above, Chang, Nguyen and Junqua fail to disclose or suggest all the features recited in independent claim 37 (as amended). Moreover, Kanevsky fails to overcome the deficiencies noted above in Chang, Nguyen and Junqua. Accordingly, no combination of Chang, Nguyen, Junqua and Kanevsky would result in, or otherwise render obvious claim 39 at least by virtue of its dependency from independent claim 37.

In light of the above, the Applicant respectfully requests that the Examiner withdraw the rejections in the Office Action dated June 17, 2008, and pass the present application to issue. The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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